

Title (en)

SELF-CALIBRATION TEMPERATURE CONTROL DEVICE AND METHOD

Title (de)

SELBSTKALIBRIERENDE TEMPERATURREGELUNGSVORRICHTUNG UND VERFAHREN

Title (fr)

DISPOSITIF ET PROCÉDÉ DE RÉGULATION DE LA TEMPÉRATURE PAR AUTO-ÉTALONNAGE

Publication

EP 2863196 A1 20150422 (EN)

Application

EP 12878679 A 20120619

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Abstract (en)

The present invention provides a self-calibration temperature control method and device. The present invention comprises: a temperature feedback and control unit, a precise temperature measurement unit, and a temperature calibration unit. The temperature feedback and control unit comprises: a negative temperature coefficient thermistor and an analog feedback control circuit that are connected with a controlled heating element. The temperature calibration unit comprises: a CPU, a data latch circuit with an input end connected with the CPU through a bus, and a digital potentiometer connected with the temperature feedback and control unit, an output end of the data latch circuit being connected with the digital potentiometer through the bus. The CPU comprises: a judging unit, a calibration parameter storage module, and a digital potentiometer connection step setting module, the digital potentiometer connection step setting module being configured to determine an updated calibration parameter value according to historic calibration parameter data, and further adjust a step value according to a preset resistance value, thereby adjusting a resistance value of the digital potentiometer. The device is high-efficient and reliable, and has high accuracy.

IPC 8 full level

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CPC (source: EP US)

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Cited by

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